

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

Greenheck Fan Corporation P.O. Box 410 Schofield, WI 54476

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model EACA-601D Aluminum Louver System with Damper

APPROVAL DOCUMENT: Drawing No. EACA-601D, titled "EACA-601D", sheets 1 through 10 of 10, dated 08/22/2013, prepared by the manufacturer, signed and sealed by Chander P. Nangia, P.E., bearing the Miami-Dade County Product Control approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above. The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

(MIAMI DADE COUNTY)
APPROYED

Affrod 11/26/2013 NOA No 13-0919.05 Expiration Date: December 5, 2018 Approval Date: December 5, 2013 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **EACA-601D**, titled "EACA-601D", sheets 1 through 10 of 10, dated 08/22/2013, prepared by the manufacturer, signed and sealed by Chander P. Nangia, P.E.

B. TESTS

- 1. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
 - 2) Large Missile Impact Test per FBC, TAS 201-94
 - 3) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of EACA-601D louvers, prepared by Architectural Testing, Inc., Test Report No. C6839.01-602-18, dated 08/12/2013, signed and sealed by Shawn G. Collins, P.E.
- 2. Test report on High Velocity Wind Driven Rain Resistance per AMCA 550, prepared by Architectural Testing, Inc., Test Report No. C6839.02-602-18, dated 08/12/2013, signed and sealed by Shawn G. Collins, P.E.

C. CALCULATIONS

1. Structural calculations prepared by the manufacturer, dated 08/22/2013, signed and sealed by Chander P. Nangia, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. Test report on impact test per AMCA 540 of an EACA-601D louvers, prepared by Architectural Testing, Inc., Test Report No. C6840.01-602-44, dated 08/12/2013, signed and sealed by Shawn G. Collins, P.E.

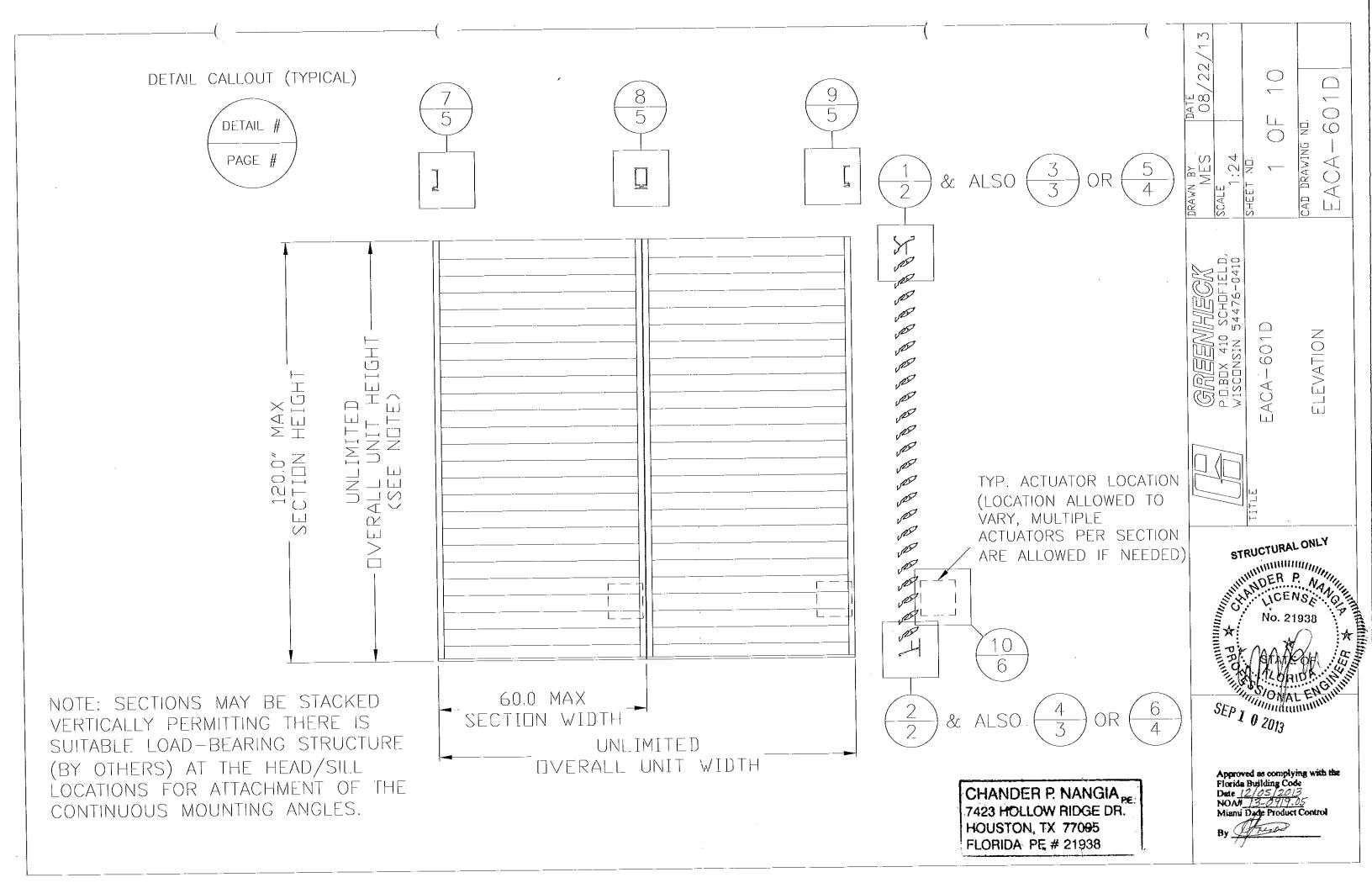
F. STATEMENTS

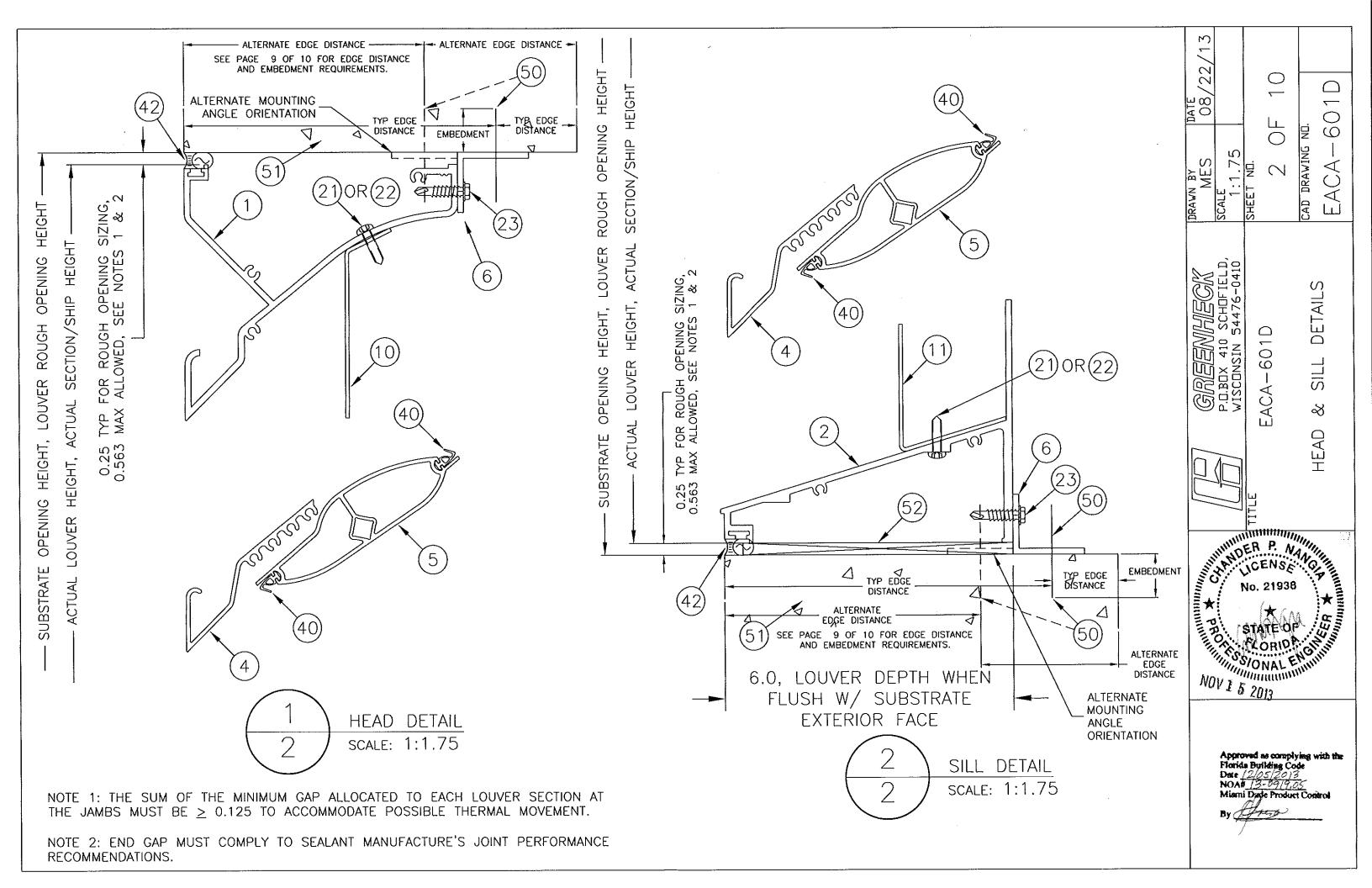
- 1. Statement letter of code conformance to 2010 FBC, issued by Chander P. Nangia, P.E., dated 09/08/2013, signed and sealed by Chander P. Nangia, P.E.
- 2. No financial interest letter issued by Chander P. Nangia, P.E., dated 09/08/2013, signed and sealed by Chander P. Nangia, P.E.

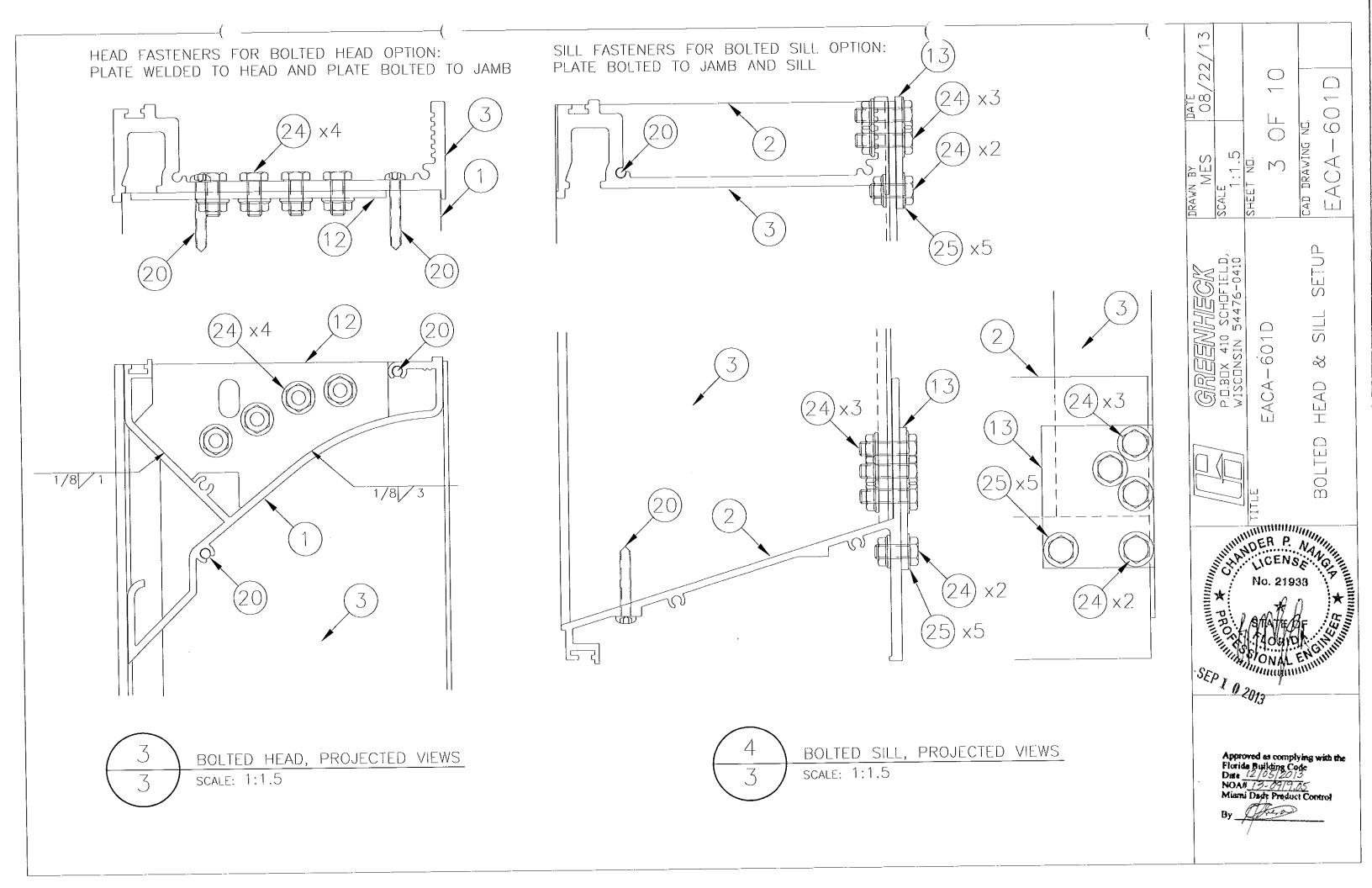
Carlos M. Utrera, P.E.

Product Control Examiner NOA No 13-0919.05

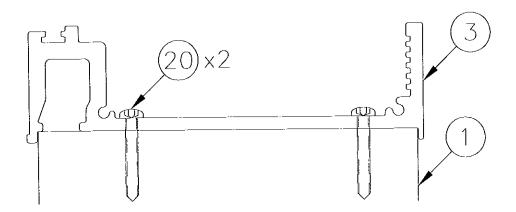
Expiration Date: December 5, 2018 Approval Date: December 5, 2013

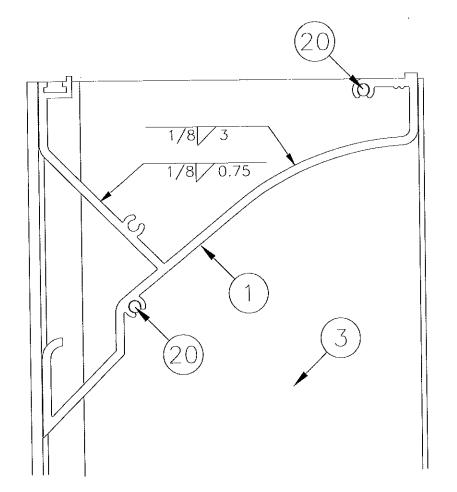






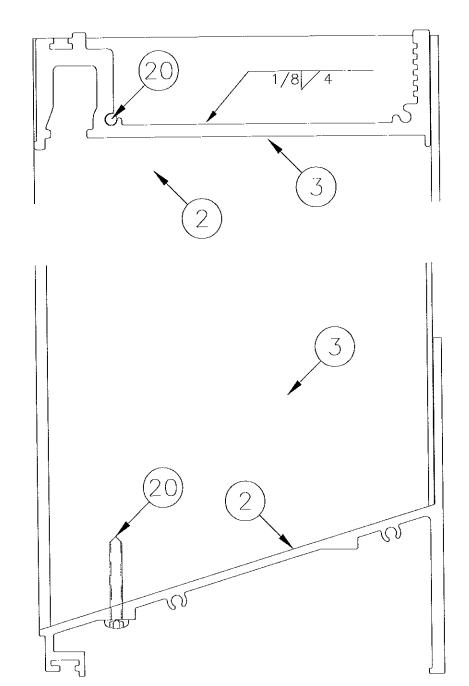
HEAD FASTENERS FOR WELDED HEAD OPTION: HEAD WELDED DIRECTLY TO JAMB



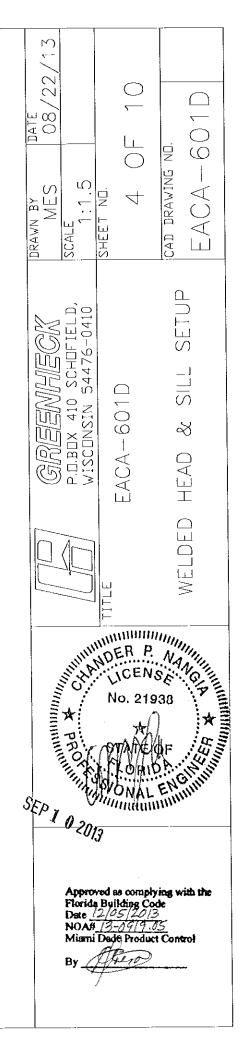


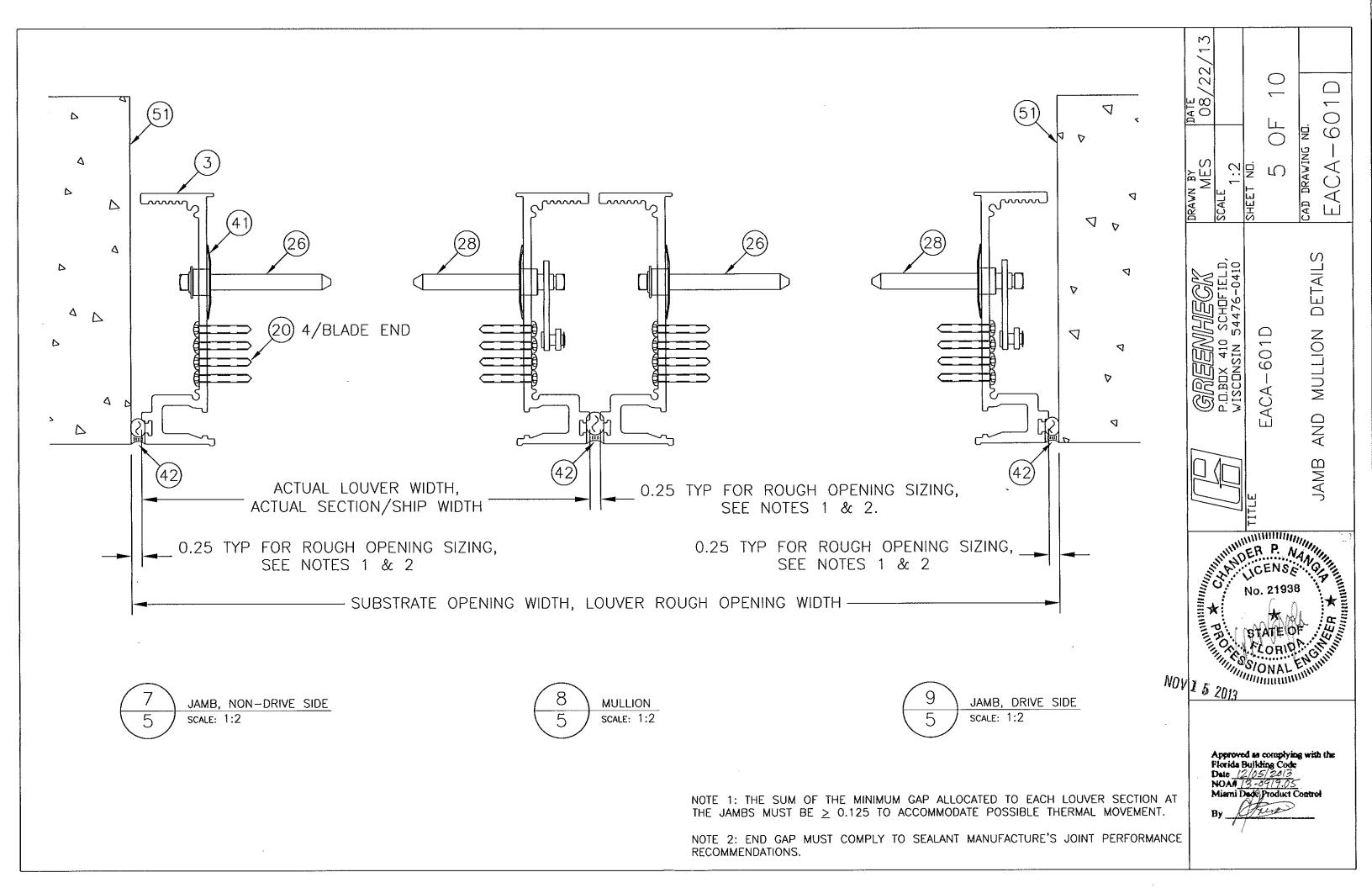
5 WELDED HEAD, PROJECTED VIEWS
4 SCALE: 1:1.5

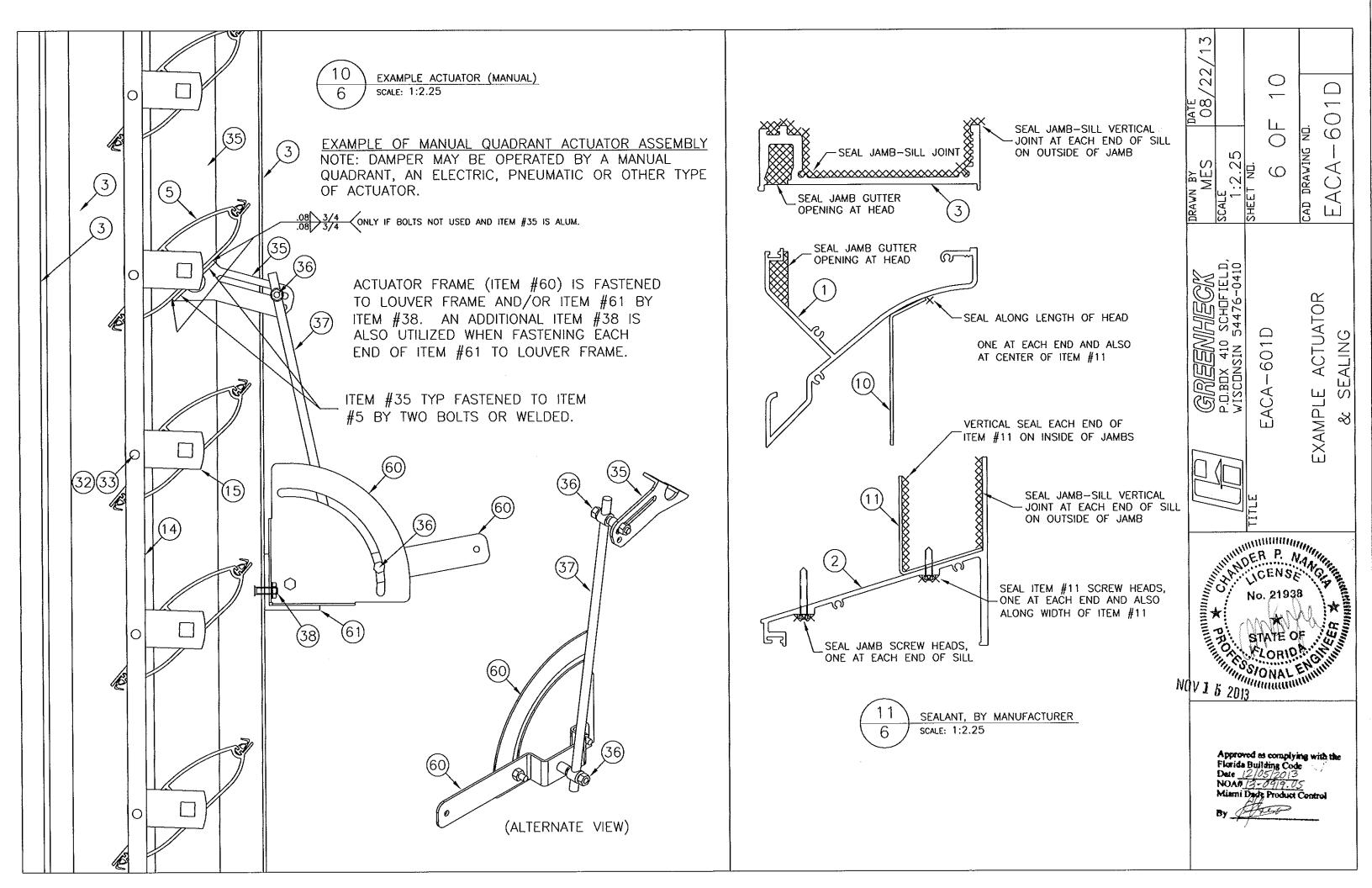
SILL FASTENERS FOR WELDED SILL OPTION: JAMB WELDED DIRECTLY TO SILL

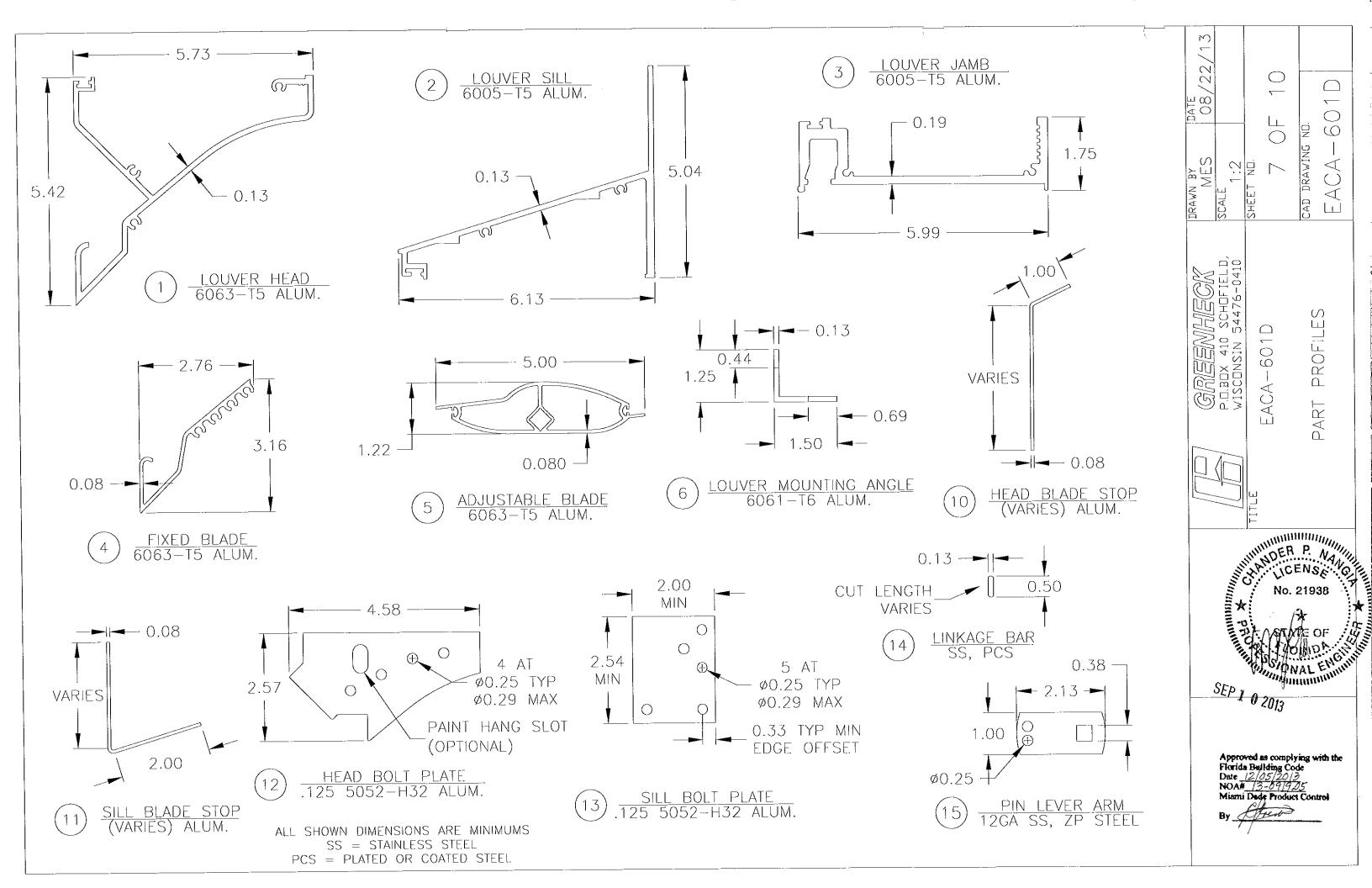












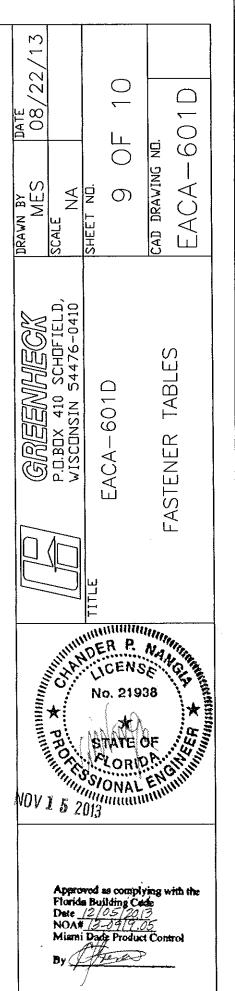
| 2/0/ DOLIEDS VEDEE DOLT CASTENED TABLE | | | | | |
|--|-------------------------|-------------|---|-------------|--|
| 3/8" POWERS WEDGE BOLT FASTENER TABLE | | | | | |
| FASTENER NUMBER | 50A | | | | |
| DESCRIPTION | 3/8' POWERS WEDGE BOLT | | | | |
| SUBSTRATE | NORMAL WEIG | HT CONCRETE | CONCRETE MASONRY (CMU) | | |
| MINIMUM | 2.5 | KSI | 6' WIDE, GRADE N, TYPE II, LIGHT/MEDIUM/NORMAL WEIGHT CMU CONFORMING TO ASTM C90, 1.5 KSI GROUT FILLED | | |
| EDGE DISTANCE (MIN) | 2 IN | 3 IN | 1-1/2 IN | S IN | |
| SLAB/BLOCK CORNER DISTANCE (MIN) | S IN | 3 IN | 1-1/2 IN | S IN | |
| PENETRATION (MIN) | 2-1/8 IN | | 2-1/2 IN | | |
| ANCHOR ANGLE END DISTANCE (MIN) | <= (ANCHOR SPACING)/2+3 | | <= (ANCHOR SPACING)/2+3 | | |
| LOUVER HEIGHT (IN) | SPACING (IN) | | SPACING (IN) | | |
| ≤120 | 6 | | NOT ALLOWED | NOT ALLOWED | |
| ≤96 | | 8 | NOT HELOWED | 6 | |
| ≤72 | 8 | | 6 | 8 | |
| ≤48 | | | 8 | _ | |

| LAG S | SCREW, SCRE | W, & BOLT | W/NUT FAST | TENER TABL | E |
|-----------------------|-------------------|-------------------|-----------------------------|------------|--------------------|
| FASTENER NUMBER | 50C | 50D | 50E | | |
| DESCRIPTION | 1/4" LAG SCREW | 3/8" LAG SCREW | 1/4"-20 SCREW OR BOLT W/NUT | | |
| SUBSTRATE | WE | 10 D | STE | ALUMINUM | |
| MINIMUM | G ≥ 0.42 | | A36 STEEL □R Fy≥36 KSI | | STRESSES > 6063-T5 |
| EDGE DISTANCE (MIN) | 1 IN | 1-1/2 IN | 1/2 IN | | 1/2 IN |
| CORNER DISTANCE (MIN) | 1 IN | 1-1/2 IN | 1/2 IN | | 1/2 IN |
| PENETRATION* (MIN) | 2-3/4 IN | | 16GA (0.06 IN) | 3/16 IN | 16GA (0.06 IN) |
| LOUVER HEIGHT (IN) | SPACING (IN) | | SPACING (IN) | | SPACING (IN) |
| ≤120 | | 6 | 4 | | 4 |
| ≤96 | 4 | | | 6 | 4 |
| ≤84 | | 8 | 6 | | 6 |
| ≤72 | 6 | | | | |

| 1/4" TAPCON SCREW FASTENER TABLE | | | | | |
|-------------------------------------|---|----------|----------|--|--|
| FASTENER NUMBER | 50B | | | | |
| DESCRIPTION | 1/4" TAPCON W/ ADVANCED THREADFORM | | | | |
| SUBSTRATE | CONCRETE OR CONCRETE MASONRY (CMU) | | | | |
| MINIMUM | CONCRETE: 3 KSI ACI 301 CONCRETE CMU: ASTM C90, 3 KSI GROUT FILLED, LIGHT-WIGHT ≥ 95 PCF, MEDIUM-WEIGHT ≥ 117 PCF | | | | |
| EDGE DISTANCE (MIN) | 1 IN | 1-1/2 IN | 2-1/2 IN | | |
| SLAB/BLOCK CORNER DISTANCE (MIN) | 1 IN | 1-1/2 IN | 2-1/2 IN | | |
| PENETRATION (MIN | 1-3/4 IN | | | | |
| LOUVER HEIGHT (IN) | SPACING (IN) | | | | |
| ≤120 | 4 | 4 | | | |
| ≤84 ≤72 | 6 | 6 | 6 | | |

| CONTINUOUS | ANGLE TO LOUVER FRAME SCREW | | | |
|-----------------------|-----------------------------|--|--|--|
| (FASTENER = ITEM #23) | | | | |
| LOUVER HEIGHT (IN) | MAXIMUM SPACING (IN) | | | |
| ≤120 | 3.75 | | | |
| ≤108 | 4 | | | |

* PENETRATION IS EQUAL TO OVERALL FASTENER LENGTH FOR CONCRETE/CMU FASTENERS. IF SHIMS ARE USED, FASTENER LENGTH MUST BE INCREASED BY THICKNESS OF SHIMS.



| TTCM | DESCRIPTION | MATERIAL | MATES |
|----------|--|------------------|---|
| ITEM | DESCRIPTION LOUVER HEAD | ALUM | NOTES |
| | LOUVER SILL | ALUM | |
| | | | |
| | LOUVER JAMB | ALUM | A OF CDACING |
| 4 | LOUVER FIXED BLADE | ALUM | 4.8" SPACING |
| | LOUVER ADJUSTABLE BLADE | ALUM | 4.8" SPACING |
| 6 | LOUVER MOUNTING ANGLE, CONTINUOUS | ALUM | AT HEAD & SILL ONLY |
| | | | |
| | HEAD BLADE STOP | ALUM | |
| 11 | SILL BLADE STOP | ALUM | |
| 12 | HEAD BOLT PLATE | ALUM | NOT REQUIRED IF HEAD IS WELDED DIRECTLY TO JAMB |
| 13 | SILL BOLT PLATE | ALUM | NOT REQUIRED IF SILL IS WELDE DIRECTLY TO JAMB |
| 14 | LINKAGE BAR | SS/PCS | |
| | PIN LEVER ARM | SS/PCS | CRIMPED TO PIN |
| | | 3377 33 | |
| 20 | #10 x 1.25 MIN SCREW | SS/PCS | |
| | #10 x 3/4 MIN SCREW, 4' MAX END DISTANCE | SS/PCS | 24" MAX D.C. ALONG BLADE STOP |
| | 1/8 MIN DIA. RIVET, 4" MAX END DISTANCE | SS/ALUM/PC | 24" MAX O.C. ALONG BLADE STOP |
| | 1/4-20 x 1 SCREW, 4" MAX END DISTANCE | | |
| | | SS/PCS | SEE FASTENER TABLE |
| | 1/4-20 × 5/8 LONG MIN BOLT W/ FLANGE NUT | SS/PCS | AT HEAD AND UNDER SLOPED SILL |
| | 1/4-20 x 7/8 LONG MIN BOLT W/ FLANGE NUT | SS/PCS | AT SILL ABOVE SLOPED SILL |
| | 0.04 × 1/4 × 5/8 WASHER | SS/PCS | |
| | NON-DRIVE PIN ASSEMBLY | VARIOUS | |
| | NON-DRIVE PIN ASSEMBLY | VARIOUS | ALLOWED TO REPLACE ITEM 26 |
| | DRIVE PIN ASSEMBLY | VARIOUS | ALLOWED TO REPLACE ITEM 26 |
| 29 | ADJUSTABLE BLADE PIN | SS/PCS | |
| 30 | PIN BUSHING | SS/BRONZE/DELRIN | |
| 31 | 1/4 E-CLIP | SS/PCS | |
| 32 | 7/32 E-CLIP | SS/PCS | |
| 33 | 1/4 × 0.5 KNURL PIN | SS/PCS | PRESS FIT INTO PIN LEVER ARM |
| | 0.04 x 3/8 SQUARE x 3/4 WASHER | SS/PCS | |
| | ADJUSTABLE BLADE DRIVE LEVER | SS/ALUM/PCS | |
| | 1/4-20 x 9/16 BALL SWIVEL W/ NUT | SS/PCS | |
| | 5/16 DIA. LINKAGE ROD | SS/PCS | 11.4 |
| | #10-32 x 5/8 THREAD STUD W/ NUT | SS/PCS | |
| 38 | #10-32 X 3/8 THREAD STOD W/ NOT | 337FC3 | |
| 40 | ADJUSTABLE BLADE SEAL | VINYL/SILICONE | |
| 41 | JAMB SEAL | 22 | |
| 42 | SEALANT AND BACKER ROD | VARIES | NOT BY MANUFACTURER |
| - | 0.00 000 000 0000 0000 | 60 (000 | 055 51075150 71015 |
| | 3/8 POWERS WEDGE BOLT | SS/PCS | SEE FASTENER TABLE |
| ****** | 1/4 TAPCON W/ ADVANCED THREADFORM SCREW | SS/PCS | SEE FASTENER TABLE |
| | 1/4 LAG SCREW | SS/PCS | SEE FASTENER TABLE |
| · | 3/8 LAG SCREW | SS/PCS | SEE FASTENER TABLE |
| 50E | 1/4-20 SCREW DR 1/4-20 BOLT W/NUT | SS/PCS | SEE FASTENER TABLE |
| 51A | CONCRETE, 1.5 OR 3 KSI | CONCRETE | NDT BY MANUFACTURER |
| | CMU, 1.5 OR 3 KSI GROUT FILLED | CONCRETE | NOT BY MANUFACTURER |
| | STRUCTURAL STEEL, 3/16 36 KSI | STEEL | NOT BY MANUFACTURER |
| | STEEL STUD, 16GA FY 36 KSI | STEEL | NOT BY MANUFACTURER |
| | WOOD, G 0.42 | WOOD | NOT BY MANUFACTURER |
| | | | |
| | ALUMINUM, 1/8 6063-T5 | ALUM | NOT BY MANUFACTURER |
| 52 | INCOMPRESSIBLE SHIM, OPTIONAL, AS REQUIRED | VARIES | NOT BY MANUFACTURER |
| 60 | ACTUATOR, COMPONENTS VARY AMONG TYPES | VADICS | TYP VARIES, NOT ALWAYS BY |
| βŲ | ACTUATUR, CUMPUNENTS VARY AMUNG TYPES ACTUATUR MOUNTING ANGLE (MAY OR MAY NOT | VARIES | MANUFACTURER BY MANUFACTURER WHEN |
| 61 | BE REQUIRED BASED ON ACTUATOR MOUNT TYPE) | ALUM | MANUFACTURER MOUNTS ACTUATO |

GENERAL NOTES:

- 1. IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS IMPOSED BY THE LOUVER ASSEMBLY.
- 2. THIS LOUVER HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH MIAMI-DADE COUNTY PROTOCOLS [AND QUALIFIED IN ACCORDANCE WITH THE 2010 FLORIDA BUILDING CODE (FBC) AND TEST PROTOCOLS/STANDARDS]:

TAS-201 (LARGE MISSILE IMPACT TEST)

TAS-202 (UNIFORM STATIC WIND PRESSURE TEST)

TAS-203 (UNIFORM CYCLIC WIND PRESSURE TEST)

AMCA STANDARD 550-09 (HIGH VELOCITY WIND-DRIVEN RAIN TEST)

- 3. THIS LOUVER HAS BEEN DESIGNED, TESTED, AND APPROVED TO WITHSTAND DESIGN PRESSURES OF UP TO AND INCLUDING +/-110 PSF.
- 4. THE LOUVER MAY BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS NOT DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM OR THE ROOM WILL HOUSE NON-WATER RESISTANT OR NON-WATER PROOF EQUIPMENT, COMPONENTS. OR SUPPLIES.
- 5. THE MAXIMUM SINGLE SECTION SIZE IS 60" WIDE BY 120" HIGH. THE MAXIMUM OVERALL/ASSEMBLED SIZE IS UNLIMITED WIDE (BY USE OF MULTIPLE SECTIONS OF 60" WIDE OR LESS) BY 120" HIGH. SECTIONS/ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDED THERE IS SUITABLE STRUCTURAL SUPPORT (DESIGNED AND INSTALLED BY OTHERS) TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER HEAD AND/OR SILL TO THE SUBSTRATE.
- 6. ALL WOOD SUBSTRATE SHALL HAVE SPECIFIC GRAVITY (G) \geq 0.42.
- 7. ALL STEEL STUD SUBSTRATE SHALL BE MIN 16 GA, FY \geq 36 KSI.
- 8. ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN 3/16" THICK, FY ≥ 36 KSI.
- 9. ALL CONCRETE SUBSTRATE SHALL BE RATED \geq 1.5 KSI OR \geq 2.5 KSI OR \geq 3 KSI AS REQUIRED BASED ON FASTENER TYPE USED.
- 10. CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING: 6" WIDE, GRADE N, TYPE II, LIGHT/MEDIUM/NORMAL-WEIGHT CMU CONFORMING TO ASTM C90, AND (AS REQUIRED BASED ON FASTENER TYPE USED) 1.5 KSI OR 3 KSI GROUT-FILLED.
- 11. ALL ALUMINUM SUBSTRATE SHALL BE MIN 1/8" THICK, WITH ALLOWABLE STRESSES \geq THAT OF 6063-T5.
- 12. LOUVER CONSTRUCTION: HEAD, SILL, JAMBS, AND BLADES ARE SQUARE CUT AT BOTH ENDS. FIXED AND ADJUSTABLE BLADE SPACING IS 4.8". FIXED BLADES ARE SECURED TO THE JAMBS WITH (4) SCREWS PER BLADE END. ADJUSTABLE BLADES ARE SECURED TO THE JAMBS WITH (1) PIN PER BLADE END. EACH JAMB IS SECURED TO THE SILL WITH (1) SCREW AND TO THE HEAD WITH (2) SCREWS. THE HEAD IS ALSO SECURED TO THE JAMB WITH (4) BOLTS PER HEAD END OR WELDED DIRECTLY TO THE JAMBS. THE SILL IS ALSO SECURED TO THE JAMB WITH (3) BOLTS PER SILL END OR WELDED DIRECTLY TO THE JAMBS.
- 13. INSTALLER TO PROVIDE SEPARATION OF DISSIMILAR MATERIALS AS REQUIRED. SEE FL BLDG CODE SECTION 2003.8.4 FOR DETAILS.
- 14. ALL STAINLESS STEEL (SS) AND PLATED OR COATED STEEL (PCS) PARTS PROVIDED BY MANUFACTURER ARE INHERENTLY CORROSION RESISTANT OR HAVE A CORROSION RESISTANT COATING.
- 15. STEEL/STANLESS STEEL/ALUMINUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOY THAT HAS EQUAL OR GREATER YIELD STRENGTH.

ITEM TABLE NOTES:

PCS = PLATED OR COATED STEEL

SS = STAINLESS STEEL

ALL SHOWN "DESCRIPTION" DIMENSIONS ARE MINIMUMS. FLANGE NUT ALLOWED TO BE REPLACED WITH A STANDARD NUT AND WASHER.

| DRAWN BY DATE 08/22/13 | SCALE NA | SHEET NO. | 10 OF 10 | CAD DRAWING NO. | EACA-601D | |
|--|--|-----------|------------|-----------------|---|--|
| GREENHIEGK | P.O.BOX 410 SCHOFIELD, WISCONSIN 54476-0410 | () | EACA-601D | NOTES | 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - | |
| [] Junium | | No. | P. A. ENS. | | MILLE X | The state of the s |
| STATE OF STA | | | | | | |

Approved as complying with the Florida Building Code Date <u>12 /05 /2013</u> NOA# <u>13-3919.05</u> Miami Dade Product Control

NOV 1 5 2013